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COMPLIANCE PROGRAMS • PLANS • TRAINING • AUDITS • PERMITS • MANAGEMENT SYSTEMS

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www.enviroservices.com

Electronic Chrome and Grinding Co., Inc.
9128-9132 Dice Road
Santa Fe Springs, CA 90670

05 November 2006
06ESCI-ECGC/HWC-01

Attention: Ed Kruck

SUBJECT: HAZARDOUS WASTE TANK SYSTEM ASSESSMENT FOR ACID/CHROME HAZARDOUS WASTE TREATMENT SYSTEM

Dear Mr. Kruck:

On 18 April 2006, ESCI EnviroServices conducted visual assessments of the condition of the hazardous waste treatment system located at the Electronic Chrome and Grinding Co., Inc. facility at 9128-9132 Dice Road, Santa Fe Springs, California. This assessment was performed to assist Electronic Chrome in demonstrating the tank system's integrity and fitness for use for the hazardous waste acid/chrome treatment system operating under Permit by Rule authorization. ESCI EnviroServices performed this assessment pursuant to Title 22 California Code of Regulations (CCR) §66265.192 'Design and Installation of New Tank Systems or Components." In accordance with this regulation, the owner or operator must obtain a written assessment reviewed and certified by an independent, qualified, professional engineer, registered in California in accordance with §66270.11(d) attesting that the system has sufficient structural integrity, is acceptable for the transferring, storing and treating of hazardous waste, and that the tanks and containment system are suitably designed to achieve the requirements of this article.

The engineering certification statements are attached as Attachment A.

1. METHODOLOGY

Electronic Chrome facility personnel provided information and described the process flow for the waste acid treatment system. Descriptions of the system, waste treatment processes and system operation information was also obtained from the October 1991 "Electronic Chrome – Chrome Precipitation and Evaporation System Operation and Maintenance Manual" developed by the system designer, KRC Associates. As noted during the evaluation, the waste treatment system utilizes a treated water recycling/reuse system, and no longer performs treated water evaporation. Visual assessments of the system including all tanks and connecting piping were performed by Hugh Davis, P.E., (Mechanical) and Oscar Malkhoo, P.E., (Chemical), both registered professional engineers in the State of California.

Mssrs. Davis and Malkhoo measured the dimensions of the secondary containment system that encloses the waste acid treatment system and inspected the containment for signs of leakage, corrosion, decomposition, pitting or any degradation that might lead to failure of the secondary containment system to function as designed.

Mssrs. Davis and Malkhoo evaluated the tank foundations, tanks, pumps, and piping to assess the adequacy of design and structural strength to prevent collapse or rupture during normal operations or foreseeable seismic event.

It should be noted that this evaluation was a visual assessment of the tanks and associated piping and fitness for continued use as part of the waste acid treatment system. Accordingly, the evaluation was not a determination or quantitative assessment of whether there have been past leaks from the system, or current, non visually-apparent leaks or damage to the tanks and piping system.

2. DESCRIPTION OF THE WASTE ACID TREATMENT SYSTEM

The Electronic Chrome treatment system has been in operation since 1993 and collects waste hydrochloric acid containing hexavalent chromium (pH < 2.0; hexavalent chromium > 5.0 mg/L) from the acid stripping tank via manual pumping to the WT1 acid/chrome holding tank. The waste acid/chrome is pumped from WT1 to the two chamber WT2 chrome reduction and precipitation tank, where the waste is neutralized by addition of magnesium hydroxide and hexavalent chromium is reduced to trivalent chromium, and then precipitated via addition of caustic soda and sodium hydrosulfite. The treated waste water is piped to WT3, a holding tank for addition/flash mixing of flocculent, and overflows into the WT4 holding tank for additional residence time. WT4 is pumped into the two stage clarifier, WT5, where the solid flocculate is allowed to settle. Clarified, treated waste water is pumped to the rinse water storage tank. The wet solids from the bottom of the cone-bottom clarifier tank is pumped through the plate & frame filter press, FP. The filtered water is either placed back into the WT5 clarifier, or transferred into the WT6 rinse water holding tank. All tanks and associated piping holding or treating hazardous wastes are located within a concrete secondary containment area. As noted in the attached summary, the volume of this containment system well exceeds the volume of the largest waste tank within the system.

Hazardous waste (chromium hydroxide) solids removed from the filter press are collected into a container, labeled and accumulated for off-site disposal as a hazardous waste.

A layout diagram of the system is included as Attachment B, and a summary and description of the waste treatment tanks evaluated is attached as Attachment C. The attached summary, "Fixed Treatment Unit Tank Integrity/Secondary Containment Engineering Report" also includes the specific engineering findings/evaluations by Mssrs. Davis and Malkhoo. Wall thickness was determined based on review of engineering specifications or engineering estimate via visual observation.

Daily inspections are performed. Records are maintained on site of the daily inspections.

3. COMPLIANCE ASSESSMENT

DESIGN STANDARDS (§66265.192(a)(1))

Design standards for the system were not available. However, they were based on vendor information provided at the time the tank system was installed and visual observations of the system. As noted in the attached certifications, the tanks, pumps and piping system are appropriate for the intended usage and are chemically resistant to the anticipated acidic environment that is encountered when treating the waste. The materials of construction are steel, fiberglass, polyethylene and polyvinyl chloride. Based upon visual evidence of the tank exteriors and partial observation of tank interiors, it is concluded that the materials of construction comply with appropriate design standards.

HAZARDOUS CHARACTERISTICS OF THE WASTE (§66265.192(a)(2))

The hazardous characteristics of the waste treated in the waste acid treatment system are corrosivity due to the presence of hydrochloric acid, and toxicity due to hexavalent chromium.

CORROSION PROTECTION (§66265.192(a)(3))

Specific materials of construction are for each component of the treatment system is contained in the attached engineering data report. The tanks have been installed above a concrete slab and concrete secondary containment has been provided. Therefore, no metal components are in direct contact with soil. External steel structural components have been cleaned and, where recommended by Mr. Davis, reinforced to provide seismic protection. Structural support and reinforcements are fabricated of steel, painted with an epoxy paint and show no current evidence of significant degradation.

UNDERGROUND TANK SYSTEMS (§66265.192(a)(4))

All tanks are installed aboveground. The area is not at risk due to vehicular traffic.

STRUCTURAL DESIGN CONSIDERATIONS (§66265.192(a)(5))

As noted in the containment certification prepared by Mr. Davis, the tank system (including pumps and piping) has been adequately designed and has sufficient structural strength to prevent collapse or rupture. It should be noted that the tank supports were recently retrofitted with steel bolts and additional bracing as a result of this 2006 Tank Certification Project. The tank foundations will maintain the load of the full tank, and all tanks are properly anchored per Zone 4 seismic requirements.

Attachment B contains the summary certification and description page for the seismic and structural evaluation.

PROPER INSTALLATION OF TANK SYSTEMS (§66265.192(b))

There are no reports available addressing observations of the tank system during the installation phase. The tanks were reportedly installed in 1992-1993 and although the operation and maintenance manual from the initial installation was reviewed for this certification, records could not be located specifically addressing the installation or design criteria in use at that time.

BACKFILL FOR UNDERGROUND TANKS AND PIPING (§66265.192(c))
This section is not applicable because the tanks, piping and components are not located underground.

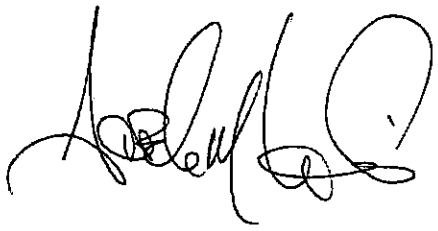
TIGHTNESS TESTING FOR NEW TANK SYSTEMS (§66265.192(d))
Records were unavailable to establish that the tanks were hydrostatically tested upon initial installation. However, they have been in use in 1993 and no leaks have been reported or recorded. During the certification process, the tanks were observed to be partially full to completely full and no evidence of leaking was observed by either Hugh Davis or Oscar Malkhoo during their site evaluations.

ANCILLARY EQUIPMENT SUPPORT AND PROTECTION (§66265.192(e))
All ancillary equipment containing regulated waste including piping, pumps, valves, mixers, filter press, etc. is located within the concrete secondary containment area. Transfer pumps are anchored within the containment area and piping is affixed to concrete walls and/or steel support structures. Painted metal supporting beams and elevated work platforms have been used to reinforce ancillary equipment from vibration, thermal expansion, or seismic movement. Since the secondary containment structure has a capacity of over 2,100 gallons which exceeds the largest tank within the structure (700 gallons), plus 6 inched of rainfall, the ancillary equipment does not appear to pose a risk of spill or release to the environment.

CORROSION PROTECTION (§66265.192(f))
The tank system is located in a reinforced concrete containment area that is coated with a chemically resistant coating. The tanks do not contact soil and the tanks are all constructed of or lined with polyethylene or polyvinyl chloride, non-metallic materials that is not susceptible to corrosion. All piping is made from PVC.

Ed, should you or the Santa Fe Springs Fire Department require additional information, please contact me at 714-322-0470.

Sincerely,
ESCI EnviroServices, Inc.



Steven M. Lichten, REA, CPEA, CPP
President
Principal Environmental Scientist

Attachment:

ATTACHMENT A

ELECTRONIC CHROME AND GRINDING CO., INC.
WASTE ACID TREATMENT SYSTEM

ENGINEERING CERTIFICATIONS

Tank and Secondary Containment Assessment Document

This document was prepared for:

Company name: **ELECTRONIC CHROME & GRINDING CO. INC.**
Address: **9128-32 DICE ROAD**
City, California ZIP: **SANTA FE SPRINGS, CA 90670**

Tank/system identification:

Chrome Reduction and Precipitation System. Tanks WT1 through WT6 and FP

Date of inspection(s)/assessment:

This equipment was inspected and certified as adequate for the requirements of 22CCR265.192 and 22CCR265.193 on July 18, 2006

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who mange the system, or those persons directly responsible for gathering the information, the information submitted is, to be the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Assessors name: Oscar Malkhoo
California PE No.: CH4744
Address of assessor: 342 Eliot Lane
City, State Zip: Long Beach, CA 90814

Oscar R. Malkhoo
09/27/2006

Date stamped/signed:

OSCAR MALKHOO, PE

Tel/Fax: 562.434.5017 • Pgr: 562.221-0718
342 Eliot Lane, Long Beach, CA 90814
E-mail: omalkhoo@verizon.net

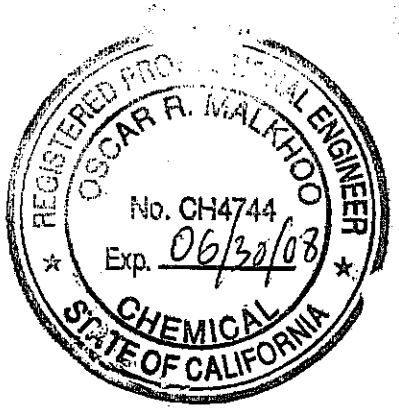
CONTAINMENT CERTIFICATION

I, Oscar Malkhoo, an independent California Registered Professional Engineer, have reviewed the entire Wastewater Treatment Plant at ***Electronic Chrome & Grinding Co. Inc.,*** 9128-32 Dice Road, Santa Fe Springs, CA 90670.

I certify to the best of my knowledge and belief that the tanks, piping and pumps are constructed of material that is suitable to handle the wastes that are treated at the facility. Based on the waste characterization that was presented by the facility the materials used were compatible with the wastes that the facility treats. The materials used in the tanks, pumps, and piping are steel, fiberglass, polyethylene, and polyvinyl chloride. These materials showed no erosion or corrosion at the time of the inspection.

The system was determined to meet the corrosion protection requirements of CCR Title 22, 66265.192.

Based on the above assessment, I believe that the system has a remaining life of over 5 years. The facility will have an independent professional engineer re-certify this system every 5 years, and any deficiencies that are found will be corrected before certification is reissued.



Oscar Malkhoo
Registered Professional Engineer

07/18/2006
Date

HUGH L. DAVIS COMPANY

MECHANICAL EQUIPMENT

~~1907 FREMONT AVENUE, SOUTH PASADENA, CALIFORNIA 91030~~

~~TELEPHONE (213) 258-7884~~

P.O. BOX 3265 SOUTH PASADENA, CA. 91031

TEL & FAX 626-441-4343

JOB Electronic Chrome & Grinding Inc.

9128 Dice Road

Santa Fe Springs, CA 90670

DOCUMENT TITLE Containment Certification

Waste Water Treatment System July 18, 2006

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

REGISTERED PROFESSIONAL ENGINEER
HUGH L. DAVIS
No. 12048
MECHANICAL
STATE OF CALIFORNIA

Hugh L. Davis, P.E.
12048

Sept. 25, 2006

HUGH L. DAVIS COMPANY
MECHANICAL EQUIPMENT

~~1907 FREMONT AVENUE, SOUTH PASADENA, CALIFORNIA 91030~~
~~TELEPHONE (213) 258-7884~~

P.O. Box 3265 SOUTH PASADENA, CA. 91031 TEL = 626-441-4343

CONTAINMENT CERTIFICATION

I, Hugh L. Davis, an independent California Registered Professional Engineer, have reviewed the entire Waste Water Treatment System, including all tanks and containments dedicated to wastewater treatment at:
ELECTRONIC CHROME & GRINDING CO. INC.
9128 Dice Road, Santa Fe Springs, CA 90670

I certify to the best of my knowledge and belief, that the tanks, pumps and piping from the rinse tanks are not leaking, nor are they unfit for use. An assessment has been made to determine that the above equipment is adequately designed and has sufficient structural strength to prevent collapse or rupture. This assessment addresses the following as specified in CCR Title 22.66265.192.

1. Tank foundations will maintain the load of the full tank.
2. Tanks are properly anchored per Zone 4 seismic requirements.
3. No tanks were visibly leaking at the time of inspection.
4. All tanks were properly installed and are well maintained.
5. The secondary containment system will contain at least 100% of the contents of the largest tank within the area.
6. This system has been in operation since 1993.

Based on the above assessment, I believe that this system is adequate for continued service.

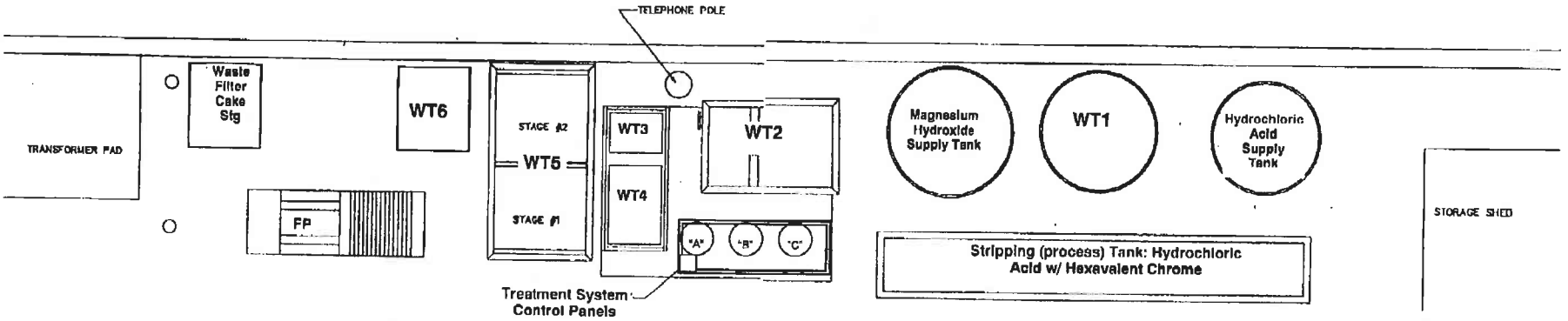
This certification is valid for 5 years from the date below. After that date, the system must be re-certified by and independent professional engineer in order to remain in compliance with CCR Title 22.265.192. Any deficiencies found must be corrected before re-certification can be issued.

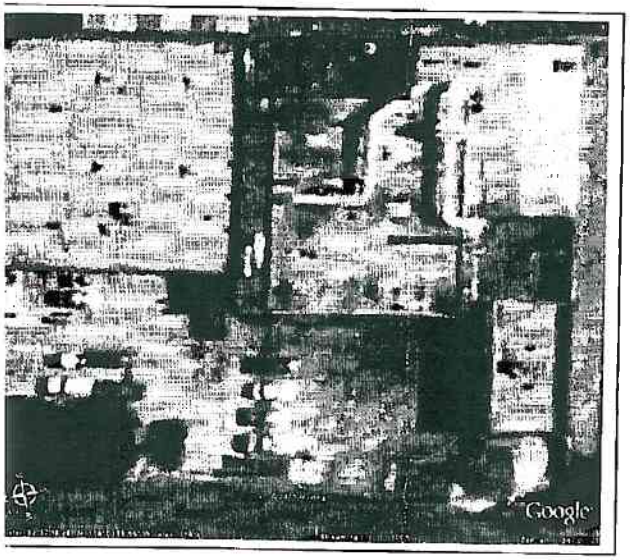
Hugh L. Davis, P.E.
Calif. M-12048

REGISTERED PROFESSIONAL ENGINEER
HUGH L. DAVIS
No. 12048
MECHANICAL
STATE OF CALIFORNIA

July 18, 2006
Date

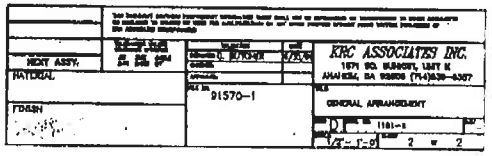
Electronic Chrome
9128-9132 Dice Road
Santa Fe Springs, CA 90670





NOTES:

WT1: Vertical Waste Hydrochloric Acid/Chrome Storage Tank
WT2: Chrome Reduction and Precipitation (magnesium hydroxide neutralization & caustic + sodium hydrosulfite addition)
WT3: Holding Tank for Flocculent Addition (polymer flash mix)
WT4: Holding Tank (flocculator)
WT5: Two Stage Clarifier
WT6: Rinse Water Storage (reused back into process)
FP: Filter Press
A: Polymer chemical drum/carboy
B: Sodium hydrosulfite drum/carboy
C: Caustic drum/carboy



Hazardous Waste Treatment System Layout

ATTACHMENT B

ELECTRONIC CHROME AND GRINDING CO., INC.
WASTE ACID TREATMENT SYSTEM

TREATMENT SYSTEM LAYOUT

ATTACHMENT C

ELECTRONIC CHROME AND GRINDING CO., INC.
WASTE ACID TREATMENT SYSTEM

"FIXED TREATMENT UNIT TANK INTEGRITY/SECONDARY CONTAINMENT ENGINEERING REPORT"

Electronic Chrome & Grinding Co. Inc.
9128-32 Dice Road
Santa Fe Springs, CA 90670
FIXED TREATMENT UNIT
TANK INTEGRITY / SECONDARY CONTAINMENT
ENGINEERING DATA REPORT

Document Number	Page 1 of 3
FTU Tank Cert.	
Issue Date July 18, 2006	Rev Date July 18, 2006 Rev Num 1
Issuer Oscar Malkhoo, PE	Approved by Hugh L. Davis, PE

Equipment Descriptions

Equipt. #	Tank Description/Configuration	Dimension LxWxH	Cap	Mat'l	Wall Thkns	Age
WT1	**Vertical Waste Storage Tank**	4' Dia. X 5' H	500 Gallons	PE	3/8"	10 yrs.

Influent Desc.	Ratings	Piping/Fittings	Leak Detect
Low pH Hydrochloric Acid and Hexavalent Chrome	1.5 sg	1" PVC Hose	Secondary Containment

Corrosion Protect	Overflow System	Damage; cracks scrapes, corrosion, punctures, repairs	Rem. Service Life	Seismic Restraint
NA Plastic	Manual Pump	None Observed	10 yrs.	Yes

Equipt. #	Tank Description/Configuration	Dimension LxWxH	Cap	Mat'l	Wall Thkns	Age
WT2	**Chrome Reduction and Precipitation**	3' X 6' X 5' H	700 Gallons	Steel Lined	¼"	15 yrs.

Influent Desc.	Ratings	Piping/Fittings	Leak Detect
Chrome Wastes from WT1	1.5 sg.	1" PVC Hose	Secondary Containment

Corrosion Protect	Overflow System	Damage; cracks scrapes, corrosion, punctures, repairs	Rem. Service Life	Seismic Restraint
Liner in Tank	Overflow to WT3	None Observed	10 yrs.	Yes

Equipt. #	Tank Description/Configuration	Dimension LxWxH	Cap	Mat'l	Wall Thkns	Age
WT3	**Holding Tank for Flocculent Addition**	3' X 2' X 20" H	100 Gallons	PE	¼"	10 yrs.

Influent Desc.	Ratings	Piping/Fittings	Leak Detect
Solution from WT2	1.5 sg	1" PVC Hose	Secondary Containment

Corrosion Protect	Overflow System	Damage; cracks scrapes, corrosion, punctures, repairs	Rem. Service Life	Seismic Restraint
NA Plastic	Overflow to WT4	None Observed	10 yrs.	Yes

Equipt. #	Tank Description/Configuration	Dimension LxWxH	Cap	Mat'l	Wall Thkns	Age
WT4	**Holding Tank**	2' X 1.5' 20" H	40 Gallons	PE	¼"	10Yrs.

Influent Desc.	Ratings	Piping/Fittings	Leak Detect
Overflow from WT3	1.5 sg	1" Pvc Hose	Secondary Containment

Corrosion Protect	Overflow System	Damage; cracks scrapes, corrosion, punctures, repairs	Rem. Service Life	Seismic Restraint
NA Plastic	Overflow to WT5	None Observed	10 yrs.	Yes

Electronic Chrome & Grinding Co. Inc.
9128-32 Dice Road
Santa Fe Springs, CA 90670
FIXED TREATMENT UNIT
TANK INTEGRITY / SECONDARY CONTAINMENT
ENGINEERING DATA REPORT

Document Number	Page 2 of 3
FTU Tank Cert.	
Issue Date July 18, 2006	Rev Date July 18, 2006 Rev Num 1
Issuer Oscar Malkhoo, PE	Approved by Hugh L. Davis, PE

Equipt. #	Tank Description/Configuration	Dimension LxWxH	Cap	Mat'l	Wall Thkns	Age
WT5	**Clarifier**	7' X 3.5' X 3' H Cone 2' H	700 Gallons	Steel	3/16"	15 yrs.

Influent Desc.	Ratings	Piping/Fittings	Leak Detect
Solution from WT4	1.5 sg	1" PVC Hose	Secondary Containment

Corrosion Protect	Overflow System	Damage; cracks scrapes, corrosion, punctures, repairs	Rem. Service Life	Seismic Restraint
None Required	Water to WT6 Sludge to FP	None Observed	10 yrs.	Yes

Equipt. #	Tank Description/Configuration	Dimension LxWxH	Cap	Mat'l	Wall Thkns	Age
WT6	**Rinse Water Storage**	64"' X 28" X 30" H	200 Gallons	Steel	¼"	15 yrs.

Influent Desc.	Ratings	Piping/Fittings	Leak Detect
Water from WT5	1.5 sg	1" PVC Hose	Secondary Containment

Corrosion Protect	Overflow System	Damage; cracks scrapes, corrosion, punctures, repairs	Rem. Service Life	Seismic Restraint
None Required	Overflow to WT4	None Observed	10 yrs.	Yes

Equipt. #	Tank Description/Configuration	Dimension LxWxH	Cap	Mat'l	Wall Thkns	Age
FP	**Filter Press, Horizontal**	8' x 3' x 4'	4 cu.ft	Mod XLPE & Steel frame	N.A.	7 y

Influent Desc.	Ratings	Piping/Fittings	Leak Detect
Neutral pH Metal Hydroxide Sludge, CrOH. SG ≤ 1.2	120 psi	1" PVC Hose	None

Corrosion Protect	Overflow System	Damage; cracks scrapes, corrosion, punctures, repairs	Rem. Service Life	Seismic Restraint
N.A. (Plastic)	Manual Reconciliation	None	15 y	yes

Electronic Chrome & Grinding Co. Inc.
9128-32 Dice Road
Santa Fe Springs, CA 90670
FIXED TREATMENT UNIT
TANK INTEGRITY / SECONDARY CONTAINMENT
ENGINEERING DATA REPORT

Document Number	Page 3 of 3
FTU Tank Cert.	
Issue Date July 18, 2006	Rev Date July 18, 2006 Rev Num 1
Issuer Oscar Malkhoo, PE	Approved by Hugh L. Davis, PE

Containment Description

Equipt. #	Tank Description/Configuration	Dimension LxWxH	Cap	Mat'l	Wall Thkns	Age
NA	**Pretreatment Containment Cell**	40' X 9.5' X 9" H	2,150 g	Concrete	8"	20y

Material Containment Desc.	Containment 25yr Rain + Container	Leak Detect
Low pH < 1, Wastewater w/ HCl, CrOH, SG ≤ 1.2 Non-Hazardous wastewater, pH ≈ 7	700 gals + 6" = 2100 g meets requirement	None

Corrosion Protect	Liner	Damage; cracks scrapes, corrosion, punctures, repairs	Rem. Service Life	Seismic Restraint
No	No	None	15 y	Yes

24 hr Leak Detection

Visual Observation/Daily Inspections are recorded. All equipment, pipes, ancillary devices are aboveground and can be observed for leak or failure.

COPY

ESCI ENVIROSERVICES, INC.
COMPLIANCE PROGRAMS • PLANS • TRAINING • AUDITS • PERMITS • MANAGEMENT SYSTEMS

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Electronic Chrome and Grinding Co., Inc.
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05 November 2006
06ESCI-ECGC/HWC-01

Attention: Ed Kruck

SUBJECT: HAZARDOUS WASTE TANK SYSTEM ASSESSMENT FOR ACID/CHROME HAZARDOUS WASTE TREATMENT SYSTEM

Dear Mr. Kruck:

On 18 April 2006, ESCI EnviroServices conducted visual assessments of the condition of the hazardous waste treatment system located at the Electronic Chrome and Grinding Co., Inc. facility at 9128-9132 Dice Road, Santa Fe Springs, California. This assessment was performed to assist Electronic Chrome in demonstrating the tank system's integrity and fitness for use for the hazardous waste acid/chrome treatment system operating under Permit by Rule authorization. ESCI EnviroServices performed this assessment pursuant to Title 22 California Code of Regulations (CCR) §66265.192 'Design and Installation of New Tank Systems or Components." In accordance with this regulation, the owner or operator must obtain a written assessment reviewed and certified by an independent, qualified, professional engineer, registered in California in accordance with §66270.11(d) attesting that the system has sufficient structural integrity, is acceptable for the transferring, storing and treating of hazardous waste, and that the tanks and containment system are suitably designed to achieve the requirements of this article.

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Mssrs. Davis and Malkhoo measured the dimensions of the secondary containment system that encloses the waste acid treatment system and inspected the containment for signs of leakage, corrosion, decomposition, pitting or any degradation that might lead to failure of the secondary containment system to function as designed.

Mssrs. Davis and Malkhoo evaluated the tank foundations, tanks, pumps, and piping to assess the adequacy of design and structural strength to prevent collapse or rupture during normal operations or foreseeable seismic event.

It should be noted that this evaluation was a visual assessment of the tanks and associated piping and fitness for continued use as part of the waste acid treatment system. Accordingly, the evaluation was not a determination or quantitative assessment of whether there have been past leaks from the system, or current, non visually-apparent leaks or damage to the tanks and piping system.

2. DESCRIPTION OF THE WASTE ACID TREATMENT SYSTEM

The Electronic Chrome treatment system has been in operation since 1993 and collects waste hydrochloric acid containing hexavalent chromium (pH < 2.0; hexavalent chromium > 5.0 mg/L) from the acid stripping tank via manual pumping to the WT1 acid/chrome holding tank. The waste acid/chrome is pumped from WT1 to the two chamber WT2 chrome reduction and precipitation tank, where the waste is neutralized by addition of magnesium hydroxide and hexavalent chromium is reduced to trivalent chromium, and then precipitated via addition of caustic soda and sodium hydrosulfite. The treated waste water is piped to WT3, a holding tank for addition/flash mixing of flocculent, and overflows into the WT4 holding tank for additional residence time. WT4 is pumped into the two stage clarifier, WT5, where the solid flocculate is allowed to settle. Clarified, treated waste water is pumped to the rinse water storage tank. The wet solids from the bottom of the cone-bottom clarifier tank is pumped through the plate & frame filter press, FP. The filtered water is either placed back into the WT5 clarifier, or transferred into the WT6 rinse water holding tank. All tanks and associated piping holding or treating hazardous wastes are located within a concrete secondary containment area. As noted in the attached summary, the volume of this containment system well exceeds the volume of the largest waste tank within the system.

Hazardous waste (chromium hydroxide) solids removed from the filter press are collected into a container, labeled and accumulated for off-site disposal as a hazardous waste.

A layout diagram of the system is included as Attachment B, and a summary and description of the waste treatment tanks evaluated is attached as Attachment C. The attached summary, "Fixed Treatment Unit Tank Integrity/Secondary Containment Engineering Report" also includes the specific engineering findings/evaluations by Mssrs. Davis and Malkhoo. Wall thickness was determined based on review of engineering specifications or engineering estimate via visual observation.

Daily inspections are performed. Records are maintained on site of the daily inspections.

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HAZARDOUS CHARACTERISTICS OF THE WASTE (§66265.192(a)(2))

The hazardous characteristics of the waste treated in the waste acid treatment system are corrosivity due to the presence of hydrochloric acid, and toxicity due to hexavalent chromium.

CORROSION PROTECTION (§66265.192(a)(3))

Specific materials of construction are for each component of the treatment system is contained in the attached engineering data report. The tanks have been installed above a concrete slab and concrete secondary containment has been provided. Therefore, no metal components are in direct contact with soil. External steel structural components have been cleaned and, where recommended by Mr. Davis, reinforced to provide seismic protection. Structural support and reinforcements are fabricated of steel, painted with an epoxy paint and show no current evidence of significant degradation.

UNDERGROUND TANK SYSTEMS (§66265.192(a)(4))

All tanks are installed aboveground. The area is not at risk due to vehicular traffic.

STRUCTURAL DESIGN CONSIDERATIONS (§66265.192(a)(5))

As noted in the containment certification prepared by Mr. Davis, the tank system (including pumps and piping) has been adequately designed and has sufficient structural strength to prevent collapse or rupture. It should be noted that the tank supports were recently retrofitted with steel bolts and additional bracing as a result of this 2006 Tank Certification Project. The tank foundations will maintain the load of the full tank, and all tanks are properly anchored per Zone 4 seismic requirements.

Attachment B contains the summary certification and description page for the seismic and structural evaluation.

PROPER INSTALLATION OF TANK SYSTEMS (§66265.192(b))

There are no reports available addressing observations of the tank system during the installation phase. The tanks were reportedly installed in 1992-1993 and although the operation and maintenance manual from the initial installation was reviewed for this certification, records could not be located specifically addressing the installation or design criteria in use at that time.

BACKFILL FOR UNDERGROUND TANKS AND PIPING (§66265.192(c))
This section is not applicable because the tanks, piping and components are not located underground.

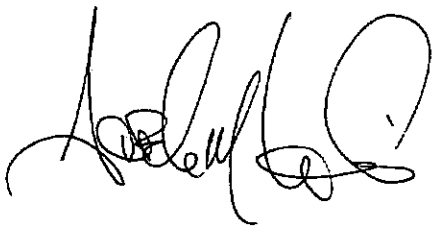
TIGHTNESS TESTING FOR NEW TANK SYSTEMS (§66265.192(d))
Records were unavailable to establish that the tanks were hydrostatically tested upon initial installation. However, they have been in use in 1993 and no leaks have been reported or recorded. During the certification process, the tanks were observed to be partially full to completely full and no evidence of leaking was observed by either Hugh Davis or Oscar Malkhoo during their site evaluations.

ANCILLARY EQUIPMENT SUPPORT AND PROTECTION (§66265.192(e))
All ancillary equipment containing regulated waste including piping, pumps, valves, mixers, filter press, etc. is located within the concrete secondary containment area. Transfer pumps are anchored within the containment area and piping is affixed to concrete walls and/or steel support structures. Painted metal supporting beams and elevated work platforms have been used to reinforce ancillary equipment from vibration, thermal expansion, or seismic movement. Since the secondary containment structure has a capacity of over 2,100 gallons which exceeds the largest tank within the structure (700 gallons), plus 6 inched of rainfall, the ancillary equipment does not appear to pose a risk of spill or release to the environment.

CORROSION PROTECTION (§66265.192(f))
The tank system is located in a reinforced concrete containment area that is coated with a chemically resistant coating. The tanks do not contact soil and the tanks are all constructed of or lined with polyethylene or polyvinyl chloride, non-metallic materials that is not susceptible to corrosion. All piping is made from PVC.

Ed, should you or the Santa Fe Springs Fire Department require additional information, please contact me at 714-322-0470.

Sincerely,
ESCI EnviroServices, Inc.



Steven M. Lichten, REA, CPEA, CPP
President
Principal Environmental Scientist

Attachment:

ATTACHMENT A

ELECTRONIC CHROME AND GRINDING CO., INC.
WASTE ACID TREATMENT SYSTEM

ENGINEERING CERTIFICATIONS

Tank and Secondary Containment Assessment Document

This document was prepared for:

Company name: **ELECTRONIC CHROME & GRINDING CO. INC.**
Address: **9128-32 DICE ROAD**
City, California ZIP: **SANTA FE SPRINGS, CA 90670**

Tank/system identification:

Chrome Reduction and Precipitation System. Tanks WT1 through WT6 and FP

Date of inspection(s)/assessment:

This equipment was inspected and certified as adequate for the requirements of 22CCR265.192 and 22CCR265.193 on July 18, 2006

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who mange the system, or those persons directly responsible for gathering the information, the information submitted is, to be the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Assessors name: Oscar Malkhoo
California PE No.: CH4744
Address of assessor: 342 Eliot Lane
City, State Zip: Long Beach, CA 90814

Oscar R. Malkhoo
09/27/2006

Date stamped/signed:

OSCAR MALKHOO, PE

Tel/Fax: 562.434.5017 • Pgr: 562.231-0718
342 Eliot Lane, Long Beach, CA 90814
E-mail: omalkhoo@verizon.net

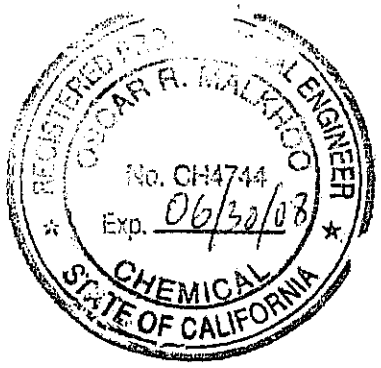
CONTAINMENT CERTIFICATION

I, Oscar Malkhoo, an independent California Registered Professional Engineer, have reviewed the entire Wastewater Treatment Plant at ***Electronic Chrome & Grinding Co. Inc.,*** 9128-32 Dice Road, Santa Fe Springs, CA 90670.

I certify to the best of my knowledge and belief that the tanks, piping and pumps are constructed of material that is suitable to handle the wastes that are treated at the facility. Based on the waste characterization that was presented by the facility the materials used were compatible with the wastes that the facility treats. The materials used in the tanks, pumps, and piping are steel, fiberglass, polyethylene, and polyvinyl chloride. These materials showed no erosion or corrosion at the time of the inspection.

The system was determined to meet the corrosion protection requirements of CCR Title 22, 66265.192.

Based on the above assessment, I believe that the system has a remaining life of over 5 years. The facility will have an independent professional engineer re-certify this system every 5 years, and any deficiencies that are found will be corrected before certification is reissued.



Oscar Malkhoo
Registered Professional Engineer

07/18/2006
Date

HUGH L. DAVIS COMPANY

MECHANICAL EQUIPMENT

~~1007 FREMONT AVENUE, SOUTH PASADENA, CALIFORNIA 91030~~

~~TELEPHONE (818) 258-7884~~

P.O. BOX 3265 SOUTH PASADENA, CA. 91031

TEL & FAX 626-441-4343

JOB Electronic Chrome & Grinding Inc.

9128 Dice Road

Santa Fe Springs, CA 90670

DOCUMENT TITLE Containment Certification

Waste Water Treatment System July 18, 2006

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

REGISTERED PROFESSIONAL ENGINEER HUGH L. DAVIS 12048 MECHANICAL STATE OF CALIFORNIA

Hugh L. Davis, P.E.

Sept. 25, 2006

HUGH L. DAVIS COMPANY
MECHANICAL EQUIPMENT

~~1907 FREMONT AVENUE, SOUTH PASADENA, CALIFORNIA 91030~~
~~TELEPHONE (213) 258-7984~~

P.O. Box 3265 SOUTH PASADENA, CA. 91031 TEL = 626-441-4343

CONTAINMENT CERTIFICATION

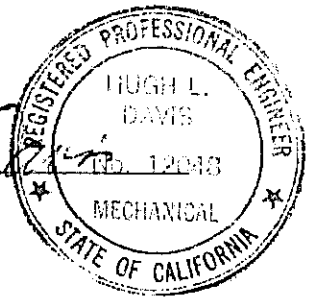
I, Hugh L. Davis, an independent California Registered Professional Engineer, have reviewed the entire Waste Water Treatment System, including all tanks and containments dedicated to wastewater treatment at:
ELECTRONIC CHROME & GRINDING CO. INC.
9128 Dice Road, Santa Fe Springs, CA 90670

I certify to the best of my knowledge and belief, that the tanks, pumps and piping from the rinse tanks are not leaking, nor are they unfit for use. An assessment has been made to determine that the above equipment is adequately designed and has sufficient structural strength to prevent collapse or rupture. This assessment addresses the following as specified in CCR Title 22.66265.192.

1. Tank foundations will maintain the load of the full tank.
2. Tanks are properly anchored per Zone 4 seismic requirements.
3. No tanks were visibly leaking at the time of inspection.
4. All tanks were properly installed and are well maintained.
5. The secondary containment system will contain at least 100% of the contents of the largest tank within the area.
6. This system has been in operation since 1993.

Based on the above assessment, I believe that this system is adequate for continued service.

This certification is valid for 5 years from the date below. After that date, the system must be re-certified by and independent professional engineer in order to remain in compliance with CCR Title 22.265.192. Any deficiencies found must be corrected before re-certification can be issued.



Hugh L. Davis, P.E.
Calif. M-12048

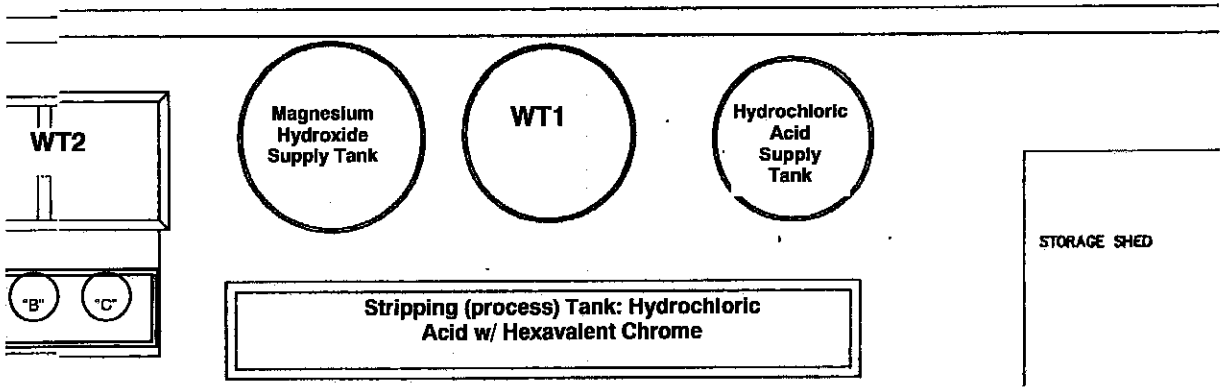
July 15, 2006
Date

ATTACHMENT B

ELECTRONIC CHROME AND GRINDING CO., INC.
WASTE ACID TREATMENT SYSTEM

TREATMENT SYSTEM LAYOUT

Electronic Chrome
9128-9132 Dice Road
ıanta Fe Springs, CA 90670



- ıical Waste Hydrochloric Acid/Chrome rage Tank
- ome Reduction and Precipitation gnesium hydroxide neutralization & caustic odium hydrosulfite addition)
- ding Tank for Flocculent Addition (polymer h mix)
- ding Tank (flocculator)
- Stage Clarifier
- se Water Storage (reused back into cess)
- Press
- er chemical drum/carboy
- n hydrosulfite drum/carboy
- c drum/carboy

NEXT ASSY.		D. BUTCHER	KRC ASSOCIATES INC. 1371 SO. SUNKIST, UNIT X ANAHEIM, CA 92806 (714)630-6367
MATERIAL		91570-1	GENERAL ARRANGEMENT
FINISH			1181-2
			1/2"= 1'-0" SHEET 2 OF 2

ıs Waste Treatment System Layout

ATTACHMENT C

ELECTRONIC CHROME AND GRINDING CO., INC.
WASTE ACID TREATMENT SYSTEM

"FIXED TREATMENT UNIT TANK INTEGRITY/SECONDARY CONTAINMENT ENGINEERING REPORT"

Electronic Chrome & Grinding Co. Inc.
9128-32 Dice Road
Santa Fe Springs, CA 90670
FIXED TREATMENT UNIT
TANK INTEGRITY / SECONDARY CONTAINMENT
ENGINEERING DATA REPORT

Document Number	Page 1 of 3
FTU Tank Cert.	
Issue Date: July 18, 2006	Rev Date: July 18, 2006
	Rev Num: 1
Issuer: Oscar Malkhoo, PE	Approved by: Hugh L. Davis, PE

Equipment Descriptions

Equipt. #	Tank Description/Configuration	Dimension LxWxH	Cap	Mat'l	Wall Thkns	Age
WT1	**Vertical Waste Storage Tank**	4' Dia. X 5' H	500 Gallons	PE	3/8"	10 yrs.

Influent Desc.	Ratings	Piping/Fittings	Leak Detect
Low pH Hydrochloric Acid and Hexavalent Chrome	1.5 sg	1" PVC Hose	Secondary Containment

Corrosion Protect	Overflow System	Damage, cracks scrapes, corrosion, punctures, repairs	Rem. Service Life	Seismic Restraint
NA Plastic	Manual Pump	None Observed	10 yrs.	Yes

Equipt. #	Tank Description/Configuration	Dimension LxWxH	Cap	Mat'l	Wall Thkns	Age
WT2	**Chrome Reduction and Precipitation**	3' X 6' X 5' H	700 Gallons	Steel Lined	¼"	15 yrs.

Influent Desc	Ratings	Piping/Fittings	Leak Detect
Chrome Wastes from WT1	1.5 sg.	1" PVC Hose	Secondary Containment

Corrosion Protect	Overflow System	Damage; cracks scrapes, corrosion, punctures, repairs	Rem. Service Life	Seismic Restraint
Liner in Tank	Overflow to WT3	None Observed	10 yrs.	Yes

Equipt. #	Tank Description/Configuration	Dimension LxWxH	Cap	Mat'l	Wall Thkns	Age
WT3	**Holding Tank for Flocculent Addition**	3' X 2' X 20" H	100 Gallons	PE	¼"	10 yrs

Influent Desc.	Ratings	Piping/Fittings	Leak Detect
Solution from WT2	1.5 sg	1" PVC Hose	Secondary Containment

Corrosion Protect	Overflow System	Damage; cracks scrapes, corrosion, punctures, repairs	Rem. Service Life	Seismic Restraint
NA Plastic	Overflow to WT4	None Observed	10 yrs.	Yes

Equipt. #	Tank Description/Configuration	Dimension LxWxH	Cap	Mat'l	Wall Thkns	Age
WT4	**Holding Tank**	2' X 1.5' 20" H	40 Gallons	PE	¼"	10Yrs.

Influent Desc.	Ratings	Piping/Fittings	Leak Detect
Overflow from WT3	1.5 sg	1" Pvc Hose	Secondary Containment

Corrosion Protect	Overflow System	Damage, cracks scrapes, corrosion, punctures, repairs	Rem. Service Life	Seismic Restraint
NA Plastic	Overflow to WT5	None Observed	10 yrs.	Yes

Electronic Chrome & Grinding Co. Inc.
9128-32 Dice Road
Santa Fe Springs, CA 90670
FIXED TREATMENT UNIT
TANK INTEGRITY / SECONDARY CONTAINMENT
ENGINEERING DATA REPORT

Document Number	Page 2 of 3
FTU Tank Cert.	
Issue Date: July 18, 2006	Rev Date: July 18, 2006
	Rev Num: 1
Issuer: Oscar Malkhoo, PE	Approved by: Hugh L. Davis, PE

Equipt. #	Tank Description/Configuration	Dimension LxWxH	Cap	Mat'l	Wall Thkns	Age
WT5	Clarifier	7' X 3.5' X 3' H Cone 2' H	700 Gallons	Steel	3/16"	15 yrs.

Influent Desc.	Ratings	Piping/Fittings	Leak Detect
Solution from WT4	1.5 sg	1" PVC Hose	Secondary Containment

Corrosion Protect	Overflow System	Damage, cracks scrapes, corrosion, punctures, repairs	Rem. Service Life	Seismic Restraint
None Required	Water to WT6 Sludge to FP	None Observed	10 yrs.	Yes

Equipt. #	Tank Description/Configuration	Dimension LxWxH	Cap	Mat'l	Wall Thkns	Age
WT6	Rinse Water Storage	64"' X 28" X 30" H	200 Gallons	Steel	¼"	15 yrs

Influent Desc	Ratings	Piping/Fittings	Leak Detect
Water from WT5	1.5 sg	1" PVC Hose	Secondary Containment

Corrosion Protect	Overflow System	Damage; cracks scrapes, corrosion, punctures, repairs	Rem. Service Life	Seismic Restraint
None Required	Overflow to WT4	None Observed	10 yrs	Yes

Equipt. #	Tank Description/Configuration	Dimension LxWxH	Cap	Mat'l	Wall Thkns	Age
FP	Filter Press, Horizontal	8' x 3' x 4'	4 cu.ft	Mod XLPE & Steel frame	N.A.	7 y

Influent Desc	Ratings	Piping/Fittings	Leak Detect
Neutral pH Metal Hydroxide Sludge, CrOH. SG ≤ 1.2	120 psi	1" PVC Hose	None

Corrosion Protect	Overflow System	Damage; cracks scrapes, corrosion, punctures, repairs	Rem. Service Life	Seismic Restraint
N.A. (Plastic)	Manual Reconciliation	None	15 y	yes

Electronic Chrome & Grinding Co. Inc.
9128-32 Dice Road
Santa Fe Springs, CA 90670
FIXED TREATMENT UNIT
TANK INTEGRITY / SECONDARY CONTAINMENT
ENGINEERING DATA REPORT

Document Number	Page 3 of 3
FTU Tank Cert.	
Issue Date July 18, 2006	Rev Date July 18, 2006 Rev Num 1
Issuer Oscar Malkhoo, PE	Approved by Hugh L. Davis, PE

Containment Description

Equipt. #	Tank Description/Configuration	Dimension LxWxH	Cap	Matl	Wall Thick	Age
NA	**Pretreatment Containment Cell**	40' X 9.5' X 9" H	2,150 g	Concrete	8"	20y

Material Containment Desc.	Containment 20yr Rain + Container	Leak Detect
Low pH < 1, Wastewater w/ HCl, CrOH, SG ≤ 1.2 Non-Hazardous wastewater, pH ≈ 7	700 gals + 6" = 2100 g meets requirement	None

Corrosion Protect	Liner	Damage: cracks scrapes, corrosion, punctures, repairs	Rem. Service Life	Seismic Restraint
No	No	None	15 y	Yes

24 hr Leak Detection

Visual Observation/Daily Inspections are recorded. All equipment, pipes, ancillary devices are aboveground and can be observed for leak or failure.